

Biotechnology and biopharmaceuticals utilize the body's natural molecules to fight disease.

Biotechnology companies apply the techniques of genetic engineering along with purification and manufacturing processes to produce molecules that are virtually identical to those found in the human body. Once produced and purified, these therapeutic molecules can be administered to patients to treat conditions such as rheumatoid arthritis, diabetes, and anemia and to prevent cancer-related infections.

New England is the hub of biopharmaceutical development, processing and manufacturing.

Several leading biotechnology companies are located in the heart of New England and depend on a New England-based workforce for effective and successful operations. These companies, in addition to others located in Rhode Island, Connecticut, and Massachusetts, will need to employ thousands of more qualified personnel in the next few years in order to meet the demands of their growing biopharmaceutical needs.



Biotechnology Manufacturing Faculty and Staff

Jay Sperry, Ph.D., Chair
Cell and Microbiology Department

John O'Leary, M.Ed.
Director of Special Programs, URI Feinstein Providence Campus

Gregory Paquette, Ph.D., CLS
Molecular Diagnostics, Director of Clinical Laboratory Science and Biotechnology Programs

Edward Bozzi, Ph.D.
Asst. Clinical Professor & Co-Coordinator
Biotech Mfg. Program

Beth Zielinski-Habershaw, Ph.D.
Industry Affairs, Biomedical Engineering

Kenneth S. Uhnak, Ph.D.
Assistant Clinical Professor and Coordinator,
Biology & Biotech Labs

Lenny Moise, Ph.D.
Assistant Research Professor, EpiVax, Inc.

John Rozembersky, M.S.
Protein Purification Specialist, President & CEO
Rozembersky Group Inc.

Anne S. De Groot, MD
Research Professor/CEO EpiVax, Inc.

Edward Balkovic, Ph.D.
Regulatory Affairs/Quality Assurance, Genzyme

Valerie Gamble, M.Ed.
Biotechnology Training, Pfizer

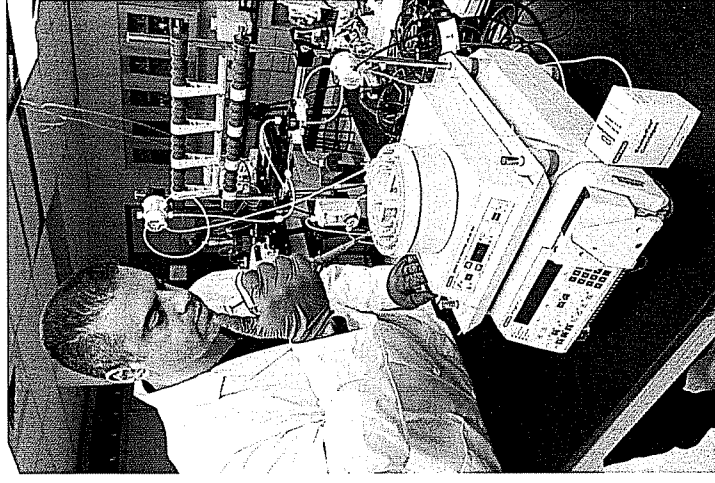
Jerry Mc Andrews, M.S.
Biopharmaceutical Manufacturing, Amgen

Carol Nolan, M.S.
Biopharmaceutical Quality Assurance, Amgen

William Tente, M.S.
Encapsulated Product Development, Neurotech

For Additional Literature Contact:
URI Feinstein Providence Campus
Office of Special Program
401-277-5056

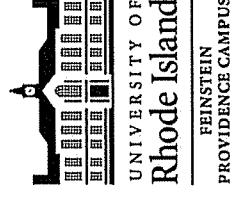
For Program Information Contact:
Kenneth S. Uhnak, Ph.D.
Administrator, Student Affairs
Biotechnology Manufacturing Program
401-277-5109
kuhnak@mail.uri.edu



The Biotechnology Manufacturing Program

**URI Feinstein
Providence Campus**

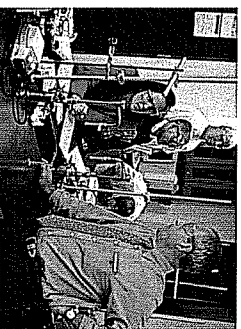
*...designed to provide
exceptional academic training
in the field of Biotechnology
and Biotechnology
Manufacturing*



The University of Rhode Island offers a cutting edge program in the area of Biotechnology Manufacturing that will prepare students for the thriving biotechnology industry.

The program is offered in an intensive format at the URI Feinstein Providence Campus and can accommodate students from all areas of Rhode Island and southern Massachusetts. Free parking is available for all URI/Providence Campus students. Courses are taught by authorities in the fields of biotechnology and biotechnology manufacturing. Not only will students gain a comprehensive knowledge of biotechnology and biotechnology manufacturing, they will also have the opportunity to complete an internship at an established biotechnology company and become eligible for employment following the internship. Companies participating in the internships include Alexion, Amgen, Avant Immunotherapeutics, Lonza, Concordia Fibers, EpiVax, Genzyme, HybriGene, Multi-Cell Technologies, Inc., Neurotech and Organogenesis.

This partnership between education and industry establishes a solid base focused on academic and economic growth. The program allows students to concentrate on class work that can earn them eligibility for employment in the fast growing field of biotechnology.



The Biotechnology Mfg. Program is designed to provide the student with several academic options that can culminate in industry-based employment as well as a B.S. degree in Clinical Laboratory Science with a specialty in Biotechnology Mfg.

So just how does this program work?

Thirty-one to thirty-four credits of basic Biology, Chemistry and Computer Science are to be completed within the first year prior to the summer internship portion of the program in order for the student to be considered for participation in an industry based internship.

Following the summer internship, students who are selected for employment may finish their Bachelor of Science degrees on a part-time basis. Students who are not eligible for a summer internship or who choose not to apply for an internship position may complete their Bachelor of Science degrees in one of several concentrations within the department.

The following schematic illustrates program requirements and options.

Sample Curriculum

Year I (Full time at URI Feinstein Providence Campus)

<i>Fall Semester</i>	<i>Credits</i>
Principles of Biology I	4
General Chemistry I	4
Intro. to Microbiology	4
Intro. to URI	1
Issues in Biotechnology	3
<i>Spring Semester</i>	<i>Credits</i>
Principles of Biology II	4
Human Physiology	3
Organic Chemistry	4
Technical Writing	3
Biotech. Mfg. Methods	4
<i>Summer Semester</i>	<i>Credits</i>
Industry based Internship	12
Total Credits	46

Year 2

Reduced time at URI Feinstein Providence Campus/Kingston Campus/Distance Learning

The second year includes courses such as Genetics, Microbiology, Anatomy, and Physiology.

Total Credits 24

Year 3

Reduced time at URI Feinstein Providence Campus/Kingston Campus/Distance Learning

The third year includes courses such as Immunology, Molecular Biology and a variety of General Education Courses

Total Credits 28

Year 4

Reduced time at URI Feinstein Providence Campus/Kingston Campus/Distance Learning

The fourth year includes courses such as Cell Biology, Statistics, Physics and a variety of electives.

Total Credits 33

Total Cumulative Credits 131

Program Fee

The \$12,000 covers the first-year, full-time, Providence-based component which includes the required fall, spring, and summer internship semesters. The fee is the same for Rhode Island and non-Rhode Island residents. Courses taken after the first year in the reduced time component are billed at the standard URI/Providence Campus rates. For scholarship information, please call (401) 277-5037 or log onto: www.uri.edu/prov

The University of Rhode Island is committed to the principles of affirmative action and the attainment of equal employment and equal educational opportunities for all qualified individuals.